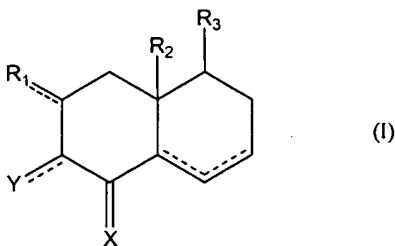


AMENDMENTS TO THE CLAIMS

1. (Original) A pest controlling composition comprising at least one compound of formula (I) or a tautomer thereof:



wherein:

X is selected from the group consisting of O, S or N-R₄;

when ----- is a single bond attached to Y, Y is selected from the group consisting of H, [C(R₇)₂]_nhalo, [C(R₇)₂]_nOR₅, [C(R₇)₂]_nSR₅, [C(R₇)₂]_n(C=O)R₆, [C(R₇)₂]_n(C=S)R₆, [C(R₇)₂]_nN(R₄)₂, [C(R₇)₂]_n(C=NR₄)R₆, [C(R₇)₂]_nNO₂ and [C(R₇)₂]_nNR₄OR₈;

when ----- is a double bond attached to Y, Y is O;

when ----- is a single bond attached to R₁, R₁ is selected from the group consisting of H, OH, SH, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₂-C₁₀ alkynyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₄-C₁₀ cycloalkenylalkyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl, C₅-C₁₃ heterocyclylalkenyl, C₁-C₁₀ alkoxy, C₂-C₁₀ alkenyloxy, C₁-C₁₀ alkylthio, C₂-C₁₀ alkenylthio, [C(R₇)₂]_nhalo, [C(R₇)₂]_n(C=O)R₆, [C(R₇)₂]_n(C=S)R₆, [C(R₇)₂]_nN(R₄)₂, [C(R₇)₂]_n(C=NR₄)R₆, [C(R₇)₂]_nNO₂ and [C(R₇)₂]_nNR₄OR₈;

when ----- is a double bond attached to R₁, R₁ is CR_{1a}R_{1b} wherein R_{1a} and R_{1b} are independently selected from C₁-C₁₀alkyl;

R₂ and R₃ are independently selected from the group consisting of H, OH, SH, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₂-C₁₀ alkynyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl,

C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₄-C₁₀ cycloalkenylalkyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl, C₅-C₁₃ heterocyclylalkenyl, C₁-C₁₀ alkoxy, C₂-C₁₀ alkenyloxy, C₁-C₁₀ alkylthio, C₂-C₁₀ alkenylthio, [C(R₇)₂]_nhalo, [C(R₇)₂]_n(C=O)R₆, [C(R₇)₂]_n(C=S)R₆, [C(R₇)₂]_nN(R₄)₂, [C(R₇)₂]_n(C=NR₄)R₆, [C(R₇)₂]_nNO₂ and [C(R₇)₂]_nNR₄OR₈;

each R₄ is independently selected from the group consisting of H, OH, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl, C₅-C₁₃ heterocyclylalkenyl, C₁-C₁₀ alkoxy and C₂-C₁₀ alkenyloxy;

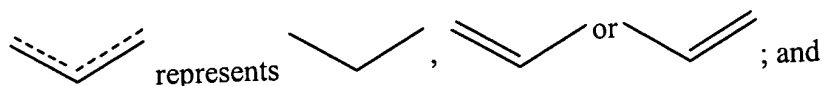
R₅ is selected from the group consisting of H, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl, C₅-C₁₃ heterocyclylalkenyl, (C=O)R₆, PO₃R₈, SO₃R₈ and SO₂R₈;

R₆ is selected from the group consisting of H, OH, C₁-C₁₀ alkoxy, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyloxy, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₆-C₁₀ aryloxy, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₃-C₆ cycloalkyloxy, C₃-C₆ cycloalkenyloxy, C₃-C₁₀ heterocyclyl, C₃-C₁₀ heterocycliloxy, C₁-C₁₀ alkylthio, C₁-C₁₀ alkenylthio, C₆-C₁₀ arylthio, C₃-C₆ cycloalkylthio, and C₃-C₁₀ heterocyclylthio;

R₇ is selected from the group consisting of H, halogen, OR₅, SR₅, N(R₄)₂, (C=O)R₆, (C=S)R₆, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₃-C₁₀ heterocyclyl, C₃-C₆ cycloalkyl, C₇-C₁₂ arylalkyl, C₄-C₁₂ heterocyclylalkyl, C₄-C₁₀ cycloalkylalkyl, C₈-C₁₃ arylalkenyl, C₅-C₁₃ heterocyclylalkenyl, and NO₂;

R₈ is selected from the group consisting of H, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₅-C₁₀ cycloalkylalkenyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl and C₅-C₁₃ heterocyclylalkenyl;

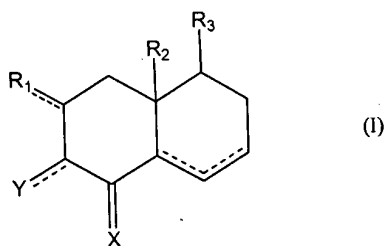
n is 0 or an integer selected from 1 to 5;



wherein each alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl and heterocyclyl group is optionally substituted.

Claims 2-19 (Cancelled)

20. (Original) A pest controlling composition comprising more than one compound of formula (I) or a tautomer thereof:



wherein:

X is selected from the group consisting of O, S or N-R₄;

when ----- is a single bond attached to Y, Y is selected from the group consisting of H, [C(R₇)₂]_nhalo, [C(R₇)₂]_nOR₅, [C(R₇)₂]_nSR₅, [C(R₇)₂]_n(C=O)R₆, [C(R₇)₂]_n(C=S)R₆, [C(R₇)₂]_nN(R₄)₂, [C(R₇)₂]_n(C=NR₄)R₆, [C(R₇)₂]_nNO₂ and [C(R₇)₂]_nNR₄OR₈;

when ----- is a double bond attached to Y, Y is O;

when ----- is a single bond attached to R₁, R₁ is selected from the group consisting of H, OH, SH, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₂-C₁₀ alkynyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₄-C₁₀ cycloalkenylalkyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl, C₅-C₁₃ heterocyclylalkenyl, C₁-C₁₀ alkoxy, C₂-C₁₀ alkenyloxy, C₁-C₁₀ alkylthio, C₂-C₁₀ alkenylthio, [C(R₇)₂]_nhalo, [C(R₇)₂]_n(C=O)R₆, [C(R₇)₂]_n(C=S)R₆, [C(R₇)₂]_nN(R₄)₂, [C(R₇)₂]_n(C=NR₄)R₆, [C(R₇)₂]_nNO₂ and [C(R₇)₂]_nNR₄OR₈;

when ----- is a double bond attached to R₁, R₁ is CR_{1a}R_{1b} wherein R_{1a} and R_{1b} are independently

selected from C₁-C₁₀alkyl;

R₂ and R₃ are independently selected from the group consisting of H, OH, SH, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₂-C₁₀ alkynyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₄-C₁₀ cycloalkenylalkyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl, C₅-C₁₃ heterocyclylalkenyl, C₁-C₁₀ alkoxy, C₂-C₁₀ alkenyloxy, C₁-C₁₀ alkylthio, C₂-C₁₀ alkenylthio, [C(R₇)₂]_nhalo, [C(R₇)₂]_n(C=O)R₆, [C(R₇)₂]_n(C=S)R₆, [C(R₇)₂]_nN(R₄)₂, [C(R₇)₂]_n(C=NR₄)R₆, [C(R₇)₂]_nNO₂ and [C(R₇)₂]_nNR₄OR₈;

each R₄ is independently selected from the group consisting of H, OH, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl, C₅-C₁₃ heterocyclylalkenyl, C₁-C₁₀ alkoxy and C₂-C₁₀ alkenyloxy;

R₅ is selected from the group consisting of H, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl, C₅-C₁₃ heterocyclylalkenyl, (C=O)R₆, PO₃R₈, SO₃R₈ and SO₂R₈;

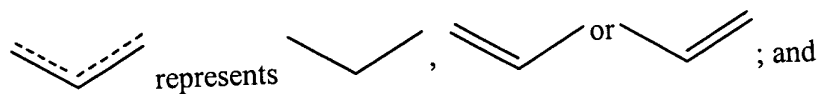
R₆ is selected from the group consisting of H, OH, C₁-C₁₀ alkoxy, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyloxy, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₆-C₁₀ aryloxy, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₃-C₆ cycloalkyloxy, C₃-C₆ cycloalkenyloxy, C₃-C₁₀ heterocyclyl, C₃-C₁₀ heterocycliloxy, C₁-C₁₀ alkylthio, C₁-C₁₀ alkenylthio, C₆-C₁₀ arylthio, C₃-C₆ cycloalkylthio, and C₃-C₁₀ heterocyclylthio;

R₇ is selected from the group consisting of H, halogen, OR₅, SR₅, N(R₄)₂, (C=O)R₆, (C=S)R₆, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₃-C₁₀ heterocyclyl, C₃-C₆ cycloalkyl, C₇-C₁₂ arylalkyl, C₄-C₁₂ heterocyclylalkyl, C₄-C₁₀ cycloalkylalkyl, C₈-C₁₃ arylalkenyl, C₅-C₁₃ heterocyclylalkenyl, and NO₂;

R₈ is selected from the group consisting of H, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₅-C₁₀ cycloalkylalkenyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl and C₅-C₁₃

heterocyclalkenyl;

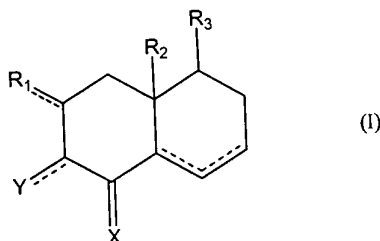
n is 0 or an integer selected from 1 to 5;



wherein each alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl and heterocyclalkenyl group is optionally substituted.

Claims 21-25 (Cancelled)

26. (Original) A method for controlling pests, said method comprising exposing said pests to a pest-controlling effective amount of a compound of formula (I) or a tautomer thereof or a composition comprising at least one compound of formula (I) or a tautomer thereof:



wherein:

X is selected from O, S or N-R₄;

when ----- is a single bond attached to Y, Y is selected from the group consisting of H, [C(R₇)₂]_nhalo, [C(R₇)₂]_nOR₅, [C(R₇)₂]_nSR₅, [C(R₇)₂]_n(C=O)R₆, [C(R₇)₂]_n(C=S)R₆, [C(R₇)₂]_nN(R₄)₂, [C(R₇)₂]_n(C=NR₄)R₆, [C(R₇)₂]_nNO₂ and [C(R₇)₂]_nNR₄OR₈;

when ----- is a double bond attached to Y, Y is O;

when ----- is a single bond attached to R₁, R₁ is selected from the group consisting of H, OH, SH, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₂-C₁₀ alkynyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₄-C₁₀ cycloalkenylalkyl, C₃-C₁₀ heterocyclalkyl, C₄-C₁₂ heterocyclalkyl, C₅-C₁₃ heterocyclalkenyl, C₁-C₁₀ alkoxy, C₂-C₁₀ alkenyloxy, C₁-C₁₀ alkylthio, C₂-C₁₀ alkenylthio, [C(R₇)₂]_nhalo,

$[C(R_7)_2]_n(C=O)R_6$, $[C(R_7)_2]_n(C=S)R_6$, $[C(R_7)_2]_nN(R_4)_2$, $[C(R_7)_2]_n(C=NR_4)R_6$, $[C(R_7)_2]_nNO_2$ and $[C(R_7)_2]_nNR_4OR_8$;

when ----- is a double bond attached to R_1 , R_1 is $CR_{1a}R_{1b}$ wherein R_{1a} and R_{1b} are independently selected from C_1 - C_{10} alkyl;

R_2 and R_3 are independently selected from the group consisting of H, OH, SH, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_2 - C_{10} alkynyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_4 - C_{10} cycloalkenylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, C_1 - C_{10} alkoxy, C_2 - C_{10} alkenyloxy, C_1 - C_{10} alkylthio, C_2 - C_{10} alkenylthio, $[C(R_7)_2]_n$ halo, $[C(R_7)_2]_n(C=O)R_6$, $[C(R_7)_2]_n(C=S)R_6$, $[C(R_7)_2]_nN(R_4)_2$, $[C(R_7)_2]_n(C=NR_4)R_6$, $[C(R_7)_2]_nNO_2$ and $[C(R_7)_2]_nNR_4OR_8$;

each R_4 is independently selected from the group consisting of H, OH, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, C_1 - C_{10} alkoxy and C_2 - C_{10} alkenyloxy;

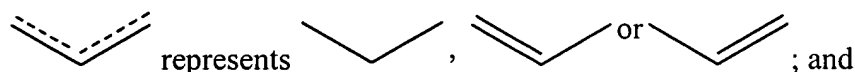
R_5 is selected from the group consisting of H, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, $(C=O)R_6$, PO_3R_8 , SO_3R_8 and SO_2R_8 ;

R_6 is selected from the group consisting of H, OH, C_1 - C_{10} alkoxy, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyloxy, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_6 - C_{10} aryloxy, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_3 - C_6 cycloalkyloxy, C_3 - C_6 cycloalkenyloxy, C_3 - C_{10} heterocyclyl, C_3 - C_{10} heterocycliloxy, C_1 - C_{10} alkylthio, C_1 - C_{10} alkenylthio, C_6 - C_{10} arylthio, C_3 - C_6 cycloalkylthio, and C_3 - C_{10} heterocyclylthio;

R_7 is selected from the group consisting of H, halogen, OR_5 , SR_5 , $N(R_4)_2$, $(C=O)R_6$, $(C=S)R_6$, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_3 - C_{10} heterocyclyl, C_3 - C_6 cycloalkyl, C_7 - C_{12} arylalkyl, C_4 - C_{12} heterocyclylalkyl, C_4 - C_{10} cycloalkylalkyl, C_8 - C_{13} arylalkenyl, C_5 - C_{13} heterocyclylalkenyl, and NO_2 ;

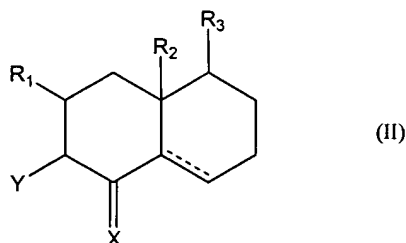
R_8 is selected from the group consisting of H, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_5 - C_{10} cycloalkylalkenyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl and C_5 - C_{13} heterocyclylalkenyl;

n is 0 or an integer selected from 1 to 5;



wherein each alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl and heterocyclyl group is optionally substituted.

27. (Currently amended) A method according to claim 3 ~~26~~ wherein the compound of formula (I) is a compound of formula (II):



wherein:

X is selected from the group consisting of O, S or N- R_4 ;

Y is selected from the group consisting of H, $[C(R_7)_2]_n$ halo, $[C(R_7)_2]_nOR_5$, $[C(R_7)_2]_nSR_5$, $[C(R_7)_2]_n(C=O)R_6$, $[C(R_7)_2]_n(C=S)R_6$, $[C(R_7)_2]_nN(R_4)_2$, $[C(R_7)_2]_n(C=NR_4)R_6$, $[C(R_7)_2]_nNO_2$ and $[C(R_7)_2]_nNR_4OR_8$;

R_1 , R_2 and R_3 are independently selected from the group consisting of H, OH, SH, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_2 - C_{10} alkynyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_4 - C_{10} cycloalkenylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, C_1 - C_{10} alkoxy, C_2 - C_{10} alkenyloxy, C_1 - C_{10} alkylthio, C_2 - C_{10} alkenylthio, $[C(R_7)_2]_n$ halo, $[C(R_7)_2]_n(C=O)R_6$, $[C(R_7)_2]_n(C=S)R_6$, $[C(R_7)_2]_nN(R_4)_2$, $[C(R_7)_2]_n(C=NR_4)R_6$, $[C(R_7)_2]_nNO_2$ and $[C(R_7)_2]_nNR_4OR_8$;

each R_4 is independently selected from the group consisting of H, OH, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclalkyl, C_5 - C_{13} heterocyclalkenyl, C_1 - C_{10} alkoxy and C_2 - C_{10} alkenyloxy;

R_5 is selected from the group consisting of H, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclalkyl, C_5 - C_{13} heterocyclalkenyl, $(C=O)R_6$, PO_3R_8 , SO_3R_8 and SO_2R_8 ;

R_6 is selected from the group consisting of H, OH, C_1 - C_{10} alkoxy, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyloxy, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_6 - C_{10} aryloxy, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_3 - C_6 cycloalkyloxy, C_3 - C_6 cycloalkenyloxy, C_3 - C_{10} heterocyclyl, C_3 - C_{10} heterocyclloxy, C_1 - C_{10} alkylthio, C_1 - C_{10} alkenylthio, C_6 - C_{10} arylthio, C_3 - C_6 cycloalkylthio, and C_3 - C_{10} heterocyclthio;

R_7 is selected from the group consisting of H, halogen, OR_5 , SR_5 , $N(R_4)_2$, $(C=O)R_6$, $(C=S)R_6$, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_3 - C_{10} heterocyclyl, C_3 - C_6 cycloalkyl, C_7 - C_{12} arylalkyl, C_4 - C_{12} heterocyclalkyl, C_4 - C_{10} cycloalkylalkyl, C_8 - C_{13} arylalkenyl, C_5 - C_{13} heterocyclalkenyl, and NO_2 ;

R_8 is selected from the group consisting of H, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_5 - C_{10} cycloalkylalkenyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclalkyl and C_5 - C_{13} heterocyclalkenyl;

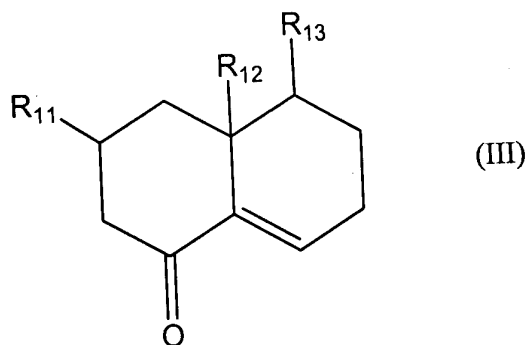
n is 0 or an integer selected from 1 to 5;

----- represents a single or double bond; and

wherein each alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl and heterocycl group is optionally substituted.

28. (Cancelled)

29. (Currently amended) A method according to claim 3_26, wherein at least one compound of formula (I) is a compound of formula (III):



wherein

R₁₁ is selected from the group consisting of C₂-C₁₀ alkenyl, C₇-C₁₂ arylalkyl, C₆-C₁₂ heteroarylalkyl and C₂-C₁₀ alkenyloxy wherein each C₂-C₁₀ alkenyl or C₂-C₁₀ alkenyloxy is optionally substituted with 1 to 3 halo, hydroxy, thiol or nitro groups; and

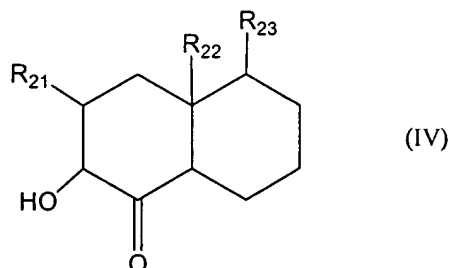
R₁₂ and R₁₃ are independently selected from the group consisting of H, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₂-C₁₀ alkynyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₃-C₁₀ cycloalkyl, C₅-C₁₀ heteroaryl, C₆-C₁₂ heteroarylalkyl and C₁-C₁₀ alkoxy, wherein each C₁-C₁₀ alkyl and C₁-C₁₀ alkoxy is optionally substituted with 1 to 3 halo, hydroxy, thiol or nitro groups.

30. (Currently amended) A method according to claim 5_29, wherein R₁₁ is C₂-C₁₀ alkenyl optionally substituted with a hydroxy, nitro or thiol group or 1 to 3 halo groups, and R₁₂ and R₁₃ are independently selected from C₁-C₁₀ alkyl optionally substituted with a hydroxy, nitro or thiol group or 1 to 3 halo groups.

31. (Currently amended) A method according to claim 3_26 wherein at least one compound of formula (I) is eremophilone.

32. (Cancelled)

33. (Currently amended) A method according to claim 3_26 wherein at least one compound of formula (I) is a compound of formula (IV):



wherein R_{21} , R_{22} and R_{23} are independently selected from the group consisting of H, OH, SH, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_2 - C_{10} alkynyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_4 - C_{10} cycloalkenylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, C_1 - C_{10} alkoxy, C_2 - C_{10} alkenyloxy, C_1 - C_{10} alkylthio, C_2 - C_{10} alkenylthio, $[C(R_7)_2]_n$ halo, $[C(R_7)_2]_n(C=O)R_6$, $[C(R_7)_2]_n(C=S)R_6$, $[C(R_7)_2]_nN(R_4)_2$, $[C(R_7)_2]_n(C=NR_4)R_6$, $[C(R_7)_2]_nNO_2$ and $[C(R_7)_2]_nNR_4OR_8$; each R_4 is independently selected from the group consisting of H, OH, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, C_1 - C_{10} alkoxy and C_2 - C_{10} alkenyloxy;

R_6 is selected from the group consisting of H, OH, C_1 - C_{10} alkoxy, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyloxy, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_6 - C_{10} aryloxy, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_3 - C_6 cycloalkyloxy, C_3 - C_6 cycloalkenyl, C_3 - C_{10} heterocyclyl, C_3 - C_{10} heterocycliloxy, C_1 - C_{10} alkylthio, C_1 - C_{10} alkenylthio, C_6 - C_{10} arylthio, C_3 - C_6 cycloalkylthio, and C_3 - C_{10} heterocyclylthio;

R_7 is selected from the group consisting of H, halogen, OR_5 , SR_5 , $N(R_4)_2$, $(C=O)R_6$, $(C=S)R_6$, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_3 - C_{10} heterocyclyl, C_3 - C_6 cycloalkyl, C_7 - C_{12} arylalkyl, C_4 - C_{12} heterocyclylalkyl, C_4 - C_{10} cycloalkylalkyl, C_8 - C_{13} arylalkenyl, C_5 - C_{13} heterocyclylalkenyl, and NO_2 ;

R_8 is selected from the group consisting of H, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12}

arylalkyl, C₈-C₁₃ arylalkenyl, C₃-C₆ cycloalkyl, C₃-C₆ cycloalkenyl, C₄-C₁₀ cycloalkylalkyl, C₅-C₁₀ cycloalkylalkenyl, C₃-C₁₀ heterocyclyl, C₄-C₁₂ heterocyclylalkyl and C₅-C₁₃ heterocyclylalkenyl; and

n is 0 or an integer selected from 1 to 5;

wherein each alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl and heterocyclyl group is optionally substituted.

34. (Currently amended) A method according to claim 8 ~~33~~ wherein R₂₁ is selected from the group consisting of C₂-C₁₀ alkenyl, C₇-C₁₂ arylalkyl, C₆-C₁₂ heteroarylalkyl and C₂-C₁₀ alkenyloxy wherein each C₂-C₁₀ alkenyl or C₂-C₁₀ alkenyloxy is optionally substituted with 1 to 3 halo, hydroxy, thiol or nitro groups; and

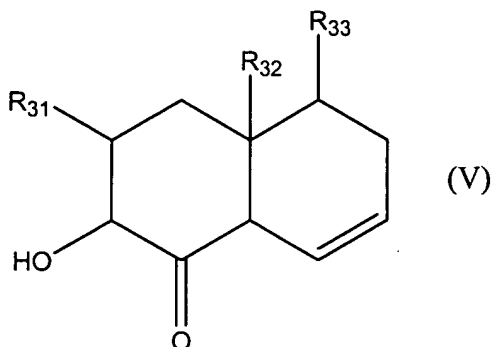
R₂₂ and R₂₃ are independently selected from the group consisting of H, C₁-C₁₀ alkyl, C₂-C₁₀ alkenyl, C₂-C₁₀ alkynyl, C₆-C₁₀ aryl, C₇-C₁₂ arylalkyl, C₃-C₁₀ cycloalkyl, C₅-C₁₀ heteroaryl, C₆-C₁₂ heteroarylalkyl and C₁-C₁₀ alkoxy, wherein each C₁-C₁₀ alkyl and C₁-C₁₀ alkoxy is optionally substituted with 1 to 3 halo, hydroxy, thiol or nitro groups.

35. (Currently amended) A method according to claim 9 ~~34~~ wherein R₂₁ is C₂-C₁₀ alkenyl, optionally substituted with a hydroxy, thiol or nitro group or 1 to 3 halo groups, and R₂₂ and R₂₃ are independently selected from C₁-C₁₀ alkyl, optionally substituted with a hydroxy, thiol or nitro group or 1 to 3 halo groups.

36. (Currently amended) A method according to claim 3 ~~26~~ wherein at least one compound of formula (I) is 8-hydroxy-1(10)dihydroeremophilone.

37. (Cancelled)

38. (Currently amended) A method composition according to claim 3 ~~1~~ comprising at least one compound of formula (V):



wherein R_{31} is selected from the group consisting of C_2 - C_{10} alkenyl, C_7 - C_{12} arylalkyl, C_6 - C_{12} heteroarylalkyl and C_2 - C_{10} alkenyloxy wherein each C_2 - C_{10} alkenyl or C_2 - C_{10} alkenyloxy is optionally substituted with 1 to 3 halo, hydroxy, thiol or nitro groups; and

R_{32} and R_{33} are independently selected from the group consisting of H, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_2 - C_{10} alkynyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_3 - C_{10} cycloalkyl, C_5 - C_{10} heteroaryl, C_6 - C_{12} heteroarylalkyl and C_1 - C_{10} alkoxy, wherein each C_1 - C_{10} alkyl and C_1 - C_{10} alkoxy is optionally substituted with 1 to 3 halo, hydroxy, thiol or nitro groups.

39. (Currently amended) A method composition according to claim 12 38 wherein R_{31} is C_2 - C_{10} alkenyl optionally substituted with a hydroxy, nitro or thiol group or 1 to 3 halo groups, and R_{32} and R_{33} are independently selected from C_1 - C_{10} alkyl optionally substituted with a hydroxy, nitro or thiol group or 1 to 3 halo groups.

40. (Currently amended) A method composition according to claim 3 4 wherein at least one compound of formula (I) is 8-hydroxyeremophila-1,11-dienone.

41. (Currently amended) A method according to claim 3 26 wherein the composition comprises an extract containing at least one compound of formula (I) obtained from a volatile oil bearing plant from the Myoporaceae family.

42. (Cancelled)

43. (Cancelled)

44. (Currently amended) A method according to claim 3 26 wherein the pest-controlling effective amount is a pesticidally effective amount.

45. (Currently amended) A method according to claim 3_26 wherein the pest-controlling effective amount is a pest-repelling effective amount.

46. (Currently amended) A method according to claim 3_26 wherein the pest-controlling effective amount is a antifeedant effective amount.

47. (Currently amended) A method according to claim 3_26 wherein the pests are selected from the group consisting of insects, arachnids, helminths and molluscs.

48. (Currently amended) A method according to claim 3_26 wherein the pests are selected from the group consisting of termites, earwigs, cockroaches and wood borer beetles and their larvae.

49. (Currently amended) A method according to claim 3_26 wherein the pests are wood associated pests.

50. (Currently amended) A method according to claim 21_49 wherein the wood associated pests are selected from the group consisting of termites and wood borer beetles.

51. (Currently amended) A method according to claim 22_50 wherein the wood associated pests are termites.

52. (Currently amended) A method according to claim 3_26 wherein pests are exposed to the pest-controlling effective amount of a compound of formula (I) or a composition comprising at least one compound of formula (I) by applying the compound or composition to a site of infestation, a potential site of infestation, a habitat of the pest or a potential habitat of the pest.

53. (Currently amended) A method according to claim 24_52 wherein the compound or composition is applied to a surface or impregnated into a material or article of manufacture.

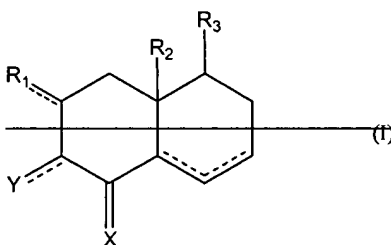
54. (Currently amended) A method according to claim 25_53 wherein the compound or composition is applied to a surface by spraying, coating or painting the surface.

55. (Currently amended) A method according to claim 26_54 wherein the surface is a soil surface, timber, buildings, wooden articles of manufacture or a physical barrier.

56. (Currently amended) A method according to claim ~~27~~ 55 wherein the material or article of manufacture is soil, timber, timber or wooden products or buildings or parts of buildings.

57. (Currently amended) A method according to claim ~~24~~ 52 wherein the compound or composition is applied in a band or furrow around a site of infestation or potential infestation or is mixed with a layer of soil at a site of infestation or a potential site of infestation.

58. (Currently amended) A material or article of manufacture for use in pest control that is coated or impregnated with at least one compound of formula (I) as defined in claim 1 or a tautomer thereof or with a composition containing at least one compound of formula (I) as defined in claim 1 or a tautomer thereof and wherein the article of manufacture is selected from the group consisting of a pest shield, a pest barrier, soil and a timber product.



wherein:

X is selected from the group consisting of O, S or N-R₄;

when — is a single bond attached to Y, Y is selected from the group consisting of H,

[C(R₇)₂]_nhalo, [C(R₇)₂]_nOR₅, [C(R₇)₂]_nSR₅, [C(R₇)₂]_n(C=O)R₆, [C(R₇)₂]_n(C=S)R₆,

[C(R₇)₂]_nN(R₄)₂, [C(R₇)₂]_n(C=NR₄)R₆, [C(R₇)₂]_nNO₂ and [C(R₇)₂]_nNR₄OR₈;

when — is a double bond attached to Y, Y is O;

when — is a single bond attached to R₁, R₁ is selected from the group consisting of H, OH,

SH, C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₆-C₁₀-aryl, C₇-C₁₂-arylalkyl, C₈-C₁₃

arylalkenyl, C₃-C₆-cycloalkyl, C₃-C₆-cycloalkenyl, C₄-C₁₀-cycloalkylalkyl, C₄-C₁₀

cycloalkenylalkyl, C₃-C₁₀-heterocyclyl, C₄-C₁₂-heterocyclylalkyl, C₅-C₁₃-heterocyclylalkenyl, C₁-

C₁₀-alkoxy, C₂-C₁₀-alkenyloxy, C₁-C₁₀-alkylthio, C₂-C₁₀-alkenylthio, [C(R₇)₂]_nhalo,

$[C(R_7)_2]_n(C=O)R_6$, $[C(R_7)_2]_n(C=S)R_6$, $[C(R_7)_2]_nN(R_4)_2$, $[C(R_7)_2]_n(C=NR_4)R_6$, $[C(R_7)_2]_nNO_2$ and $[C(R_7)_2]_nNR_4OR_8$;

when _____ is a double bond attached to R_1 , R_1 is $CR_{1a}R_{1b}$ wherein R_{1a} and R_{1b} are independently selected from C_1 - C_{10} alkyl;

R_2 and R_3 are independently selected from the group consisting of H, OH, SH, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_2 - C_{10} alkynyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_4 - C_{10} cycloalkenylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, C_1 - C_{10} alkoxy, C_2 - C_{10} alkenyloxy, C_1 - C_{10} alkylthio, C_2 - C_{10} alkenylthio, $[C(R_7)_2]_n$ halo, $[C(R_7)_2]_n(C=O)R_6$, $[C(R_7)_2]_n(C=S)R_6$, $[C(R_7)_2]_nN(R_4)_2$, $[C(R_7)_2]_n(C=NR_4)R_6$, $[C(R_7)_2]_nNO_2$ and $[C(R_7)_2]_nNR_4OR_8$;

each R_4 is independently selected from the group consisting of H, OH, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, C_1 - C_{10} alkoxy and C_2 - C_{10} alkenyloxy;

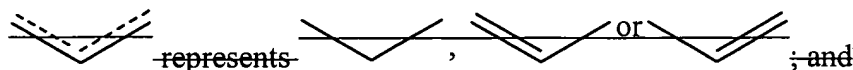
R_5 is selected from the group consisting of H, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_7 - C_{12} arylalkyl, C_8 - C_{13} arylalkenyl, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_4 - C_{10} cycloalkylalkyl, C_3 - C_{10} heterocyclyl, C_4 - C_{12} heterocyclylalkyl, C_5 - C_{13} heterocyclylalkenyl, $(C=O)R_6$, PO_3R_8 , SO_3R_8 and SO_2R_8 ;

R_6 is selected from the group consisting of H, OH, C_1 - C_{10} alkoxy, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyloxy, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_6 - C_{10} arylloxy, C_3 - C_6 cycloalkyl, C_3 - C_6 cycloalkenyl, C_3 - C_6 cycloalkyloxy, C_3 - C_6 cycloalkenyloxy, C_3 - C_{10} heterocyclyl, C_3 - C_{10} heterocyclyloxy, C_1 - C_{10} alkylthio, C_1 - C_{10} alkenylthio, C_6 - C_{10} arylthio, C_3 - C_6 cycloalkylthio, and C_3 - C_{10} heterocyclylthio;

R_7 is selected from the group consisting of H, halogen, OR_5 , SR_5 , $N(R_4)_2$, $(C=O)R_6$, $(C=S)R_6$, C_1 - C_{10} alkyl, C_2 - C_{10} alkenyl, C_6 - C_{10} aryl, C_3 - C_{10} heterocyclyl, C_3 - C_6 cycloalkyl, C_7 - C_{12} arylalkyl, C_4 - C_{12} heterocyclylalkyl, C_4 - C_{10} cycloalkylalkyl, C_8 - C_{13} arylalkenyl, C_5 - C_{13} heterocyclylalkenyl, and NO_2 ;

~~R₈ is selected from the group consisting of H, C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₆-C₁₀-aryl, C₇-C₁₂-arylalkyl, C₈-C₁₃-arylalkenyl, C₃-C₆-cycloalkyl, C₃-C₆-cycloalkenyl, C₄-C₁₀-cycloalkylalkyl, C₅-C₁₀-cycloalkylalkenyl, C₃-C₁₀-heterocyclyl, C₄-C₁₂-heterocyclylalkyl and C₅-C₁₃-heterocyclylalkenyl;~~

~~n is 0 or an integer selected from 1 to 5;~~



~~wherein each alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl and heterocyclyl group is optionally substituted.~~

Claims 59-76 (Cancelled)

77. A pest control coating comprising a composition according to claim 1.

78. (Cancelled)

79. (Currently amended) A method of combating an already existing wood associated pest infestation comprising applying a composition according to claim 1 ~~or claim 20 or a coating of claim 77 or claim 78~~ to a wood associated pest affected surface.

80. (Cancelled)

81. (Cancelled)

82. (New) A method of combating an already existing wood associated pest infestation comprising applying a coating of claim 31 to a wood associated pest affected surface.